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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,313	08/27/2003	Makoto Mogamiya	P23749	3666

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EXAMINER

KHAN, USMAN A

ART UNIT PAPER NUMBER

2622

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,313	MOGAMIYA ET AL.	
	Examiner	Art Unit	
	Usman Khan	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/27/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/27/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 01/07/2004 has been considered by the examiner. The submission is in compliance with the provisions of 37 CFR 1.97.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Electronic still camera comprising a sealed elastic extendable/contractible member for optically isolating an image pickup optical system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 - 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida (US patent No. 6,307,590).

Regarding **claim 1**, Yoshida et al. discloses an electronic still camera comprising: an image pickup element (figure 5 item 41, and column 4 lines 45 *et seq.*) provided in an optically isolated space (figure 5 and column 4 lines 45 *et seq.*) which is opened and closed by a shutter (figures 2 and 5 item 40); an image pickup optical system which makes object light incident upon the image pickup element (figures 2 item 41 not labeled in figure and 5 item 41); and a sealing member configured to seal an image pickup light path defined between the shutter and the image pickup element (figure 5 item 40 and column 4 lines 45 *et seq.*).

Regarding **claim 2**, Yoshida et al. discloses the electronic still camera according to claim 1, wherein said sealing member comprises a tubular member which surrounds a light path space defined between the shutter and the image pickup element (figure 5 item 40 and column 4 lines 45 *et seq.*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US patent No. 6,307,590) in view of Yazawa et al. (US PgPub 2003/0169333).

Regarding **claim 3**, as mentioned above in the discussion of claim 2, Yoshida teaches all of the limitations of the parent claim. However, Yoshida fails to disclose that the said tubular member is configured to be extendable and contractible in an optical axis direction of the image pickup optical system; and wherein an optical element is fitted in an opening of said tubular member on the object side to seal the tubular member. Yazawa et al., on the other hand discloses that the said tubular member is configured to be extendable and contractible in an optical axis direction of the image pickup optical system; and wherein an optical element is fitted in an opening of said tubular member on the object side to seal the tubular member.

More specifically, Yazawa et al. discloses that a tubular member configured to be extendable and contractible in an optical axis direction of the image pickup optical system (figures 4 and 6 and paragraph 0024); and wherein an optical element is fitted in an opening of said tubular member on the object side to seal the tubular member (paragraph 0054 and figures 4 item 17 and 6 item 54).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because in paragraph 0105 Yazawa et al. discloses that the use a bellows (i.e. which is extendable and contractible) will result in a simpler and a less expensive arrangement.

Regarding **claim 4**, as mentioned above in the discussion of claim 1, Yoshida teaches all of the limitations of the parent claim. Additionally, Yoshida teaches that the said sealing member comprises a tubular member which surrounds a light path space defined between the shutter and an image pickup surface of the image pickup element also a tubular member which restricts an aperture which is opened and closed by the shutter, and an optical element which seals the frame member. (figures 2 and 5 items 11, 40, and 41; and column 4 lines 45 *et seq.*). However, Yoshida fails to disclose that the said tubular member is extendable and contractible in an optical axis direction of the image pickup optical system, said tubular member being closely connected, at the end thereof which defines an opening end on the object side, to a frame member. Yazawa et al., on the other hand discloses that the said tubular member is extendable and contractible in an optical axis direction of the image pickup optical system, said tubular member being closely connected, at the end thereof which defines an opening end on the object side, to a frame member.

More specifically, Yazawa et al. discloses that a member is extendable and contractible in an optical axis direction of the image pickup optical system (figures 4 and

6 and paragraph 0024 of Yazawa et al.), said tubular member being closely connected, at the end thereof which defines an opening end on the object side (figures 4 and 6 and paragraph 0024 of Yazawa et al.), to a frame member (figure 4 item 31 is air tightly joint to nearby frames and figure 6 items 55 - 58 are air tightly joint to nearby frames of Yazawa et al.).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because in paragraph 0105 Yazawa et al. discloses that the use a bellows (i.e. which is extendable and contractible) will result in a simpler and a less expensive arrangement.

Regarding **claim 5**, as mentioned above in the discussion of claim 3, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yoshida discloses that the said tubular member is in close contact, at an end surface thereof defining the opening on the object side, with the frame member which restricts the aperture opened and closed by the shutter (figures 2 and 5 items 11, 40, and 41; and column 4 lines 45 *et seq.*).

Regarding **claim 6**, as mentioned above in the discussion of claim 3, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa et al. teaches that the optical element is secured to the frame member (figure 4 item 17 which is air tightly joint to nearby frames which is air tightly joint to item 31 which is air

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tightly joint to nearby frames and figure 6 item 54 which is air tightly joint to nearby frames which is air tightly joint to items 55 - 58 which are air tightly joint to nearby frames).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because in paragraph 0105 Yazawa et al. discloses that the use a bellows (i.e. which is extendable and contractible) will result in a simpler and a less expensive arrangement.

Regarding **claim 7**, as mentioned above in the discussion of claim 3, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yoshida teaches that the said optical member is a transparent plane-parallel plate (figures 2 and 5 item 44).

Regarding **claim 8**, as mentioned above in the discussion of claim 3, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. However, Yoshida fails to disclose that the said optical element comprises at least one of a low-pass filter and an infrared absorption filter. Yazawa et al., on the other hand discloses that the said optical element comprises at least one of a low-pass filter and an infrared absorption filter.

More specifically, Yazawa et al. discloses that the said optical element comprises at least one of a low-pass filter and an infrared absorption filter (paragraph 0058 and figures 4 and 6 item 28).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of an infrared filter can increase the use of the camera because invisible light to the human eye can be seen such as photography in the dark.

Regarding **claim 9**, Yoshida discloses an electronic still camera comprising: an image pickup element (figure 5 item 41, and column 4 lines 45 *et seq.*) provided in an optically isolated space (figure 5 and column 4 lines 45 *et seq.*) which is opened and closed by a shutter (figures 2 and 5 item 40); an image pickup optical system configured to make object light incident upon the image pickup element (figures 2 item 41 not labeled in figure and 5 item 41); and a frame member configured to restrict an aperture which is opened and closed by the shutter (figures 2 and 5 items 11, 40, and 41; and column 4 lines 45 *et seq.*). However, Yoshida fails to disclose that the said frame member being provided with at least one of a low-pass filter and an infrared absorption filter secured thereto. Yazawa et al., on the other hand discloses that the said optical element comprises at least one of a low-pass filter and an infrared absorption filter.

More specifically, Yazawa et al. discloses that the said frame member is being provided with at least one of a low-pass filter and an infrared absorption filter secured thereto (paragraph 0058 and figures 4 and 6 item 28).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of an infrared filter can increase the use of the camera because invisible light to the human eye can be seen such as photography in the dark.

Regarding **claim 12**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa et al. discloses the said infrared absorption filter is secured to the frame member, the frame member located closer to the image pickup element than the shutter (paragraph 0058 and figures 4 and 6 item 28).

Claims 10 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US patent No. 6,307,590) in view of Yazawa et al. (US PgPub 2003/0169333) in further view of Examiner's Official Notice.

Regarding **claim 10**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa

et al. teaches that the said low-pass filter and the infrared absorption filter are cemented to each other.

More specifically, Yazawa et al. discloses that the said low-pass filter and the infrared absorption filter are cemented to each other (paragraph 0058 and figures 4 and 6 item 28, also even though the invention of Yazawa et al. uses a IR filter mounted to a crystal filter the examiner takes official notice that it is old and well known in the art that the use of a optical low-pass filter in lieu of a crystal filter will eliminate any residual pixel structure in the projected image in turn producing improved image quality).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of the filters mounted in this arrangement will result in overall efficiency of the isolated space by reducing individual part movement.

Regarding **claim 11**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. Additionally, Yazawa et al. teaches that the said low-pass filter is closely secured to the frame member which is located closer to the image pickup element than the shutter (paragraph 0058 and figures 4 and 6 item 28, also even though the invention of Yazawa et al. uses a IR filter mounted to a crystal filter the examiner takes official notice that it is old and well known in the art that the use of a optical low-pass filter in lieu of a crystal filter will eliminate any residual pixel structure in the projected image in turn producing improved image quality).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Yazawa et al. with the teachings of Yoshida because the use of the filters mounted in this arrangement will result in overall efficiency of the isolated space by reducing individual part movement.

Claim 13 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US patent No. 6,307,590) in view of Yazawa et al. (US PgPub 2003/0169333) in further view of Maeda et al. (US patent No. 5,050,014).

Regarding **claim 13 - 14**, as mentioned above in the discussion of claim 9, Yoshida and Yazawa et al. teach all of the limitations of the parent claim. However, Yoshida and Yazawa et al. fail to teach that the said infrared absorption filter is secured to the frame member, is the frame member located closer to an object than the shutter. Maeda et al., on the other hand discloses that the infrared absorption filter is secured to the frame member, is the frame member located closer to an object than the shutter.

More specifically, in figure 1 Maeda et al. teaches that the said infrared absorption filter (35) is secured to the frame member, is the frame member located closer to an object than the shutter (36) (i.e. the infrared filter is located just outside of the shutter in the optical system).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to incorporate the teachings of Maeda et al. with the teachings of Yoshida and Yazawa et al. to minimize the bellows structure formed by the

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combination of Yoshida and Yazawa et al. in turn due to the size reduction power consumption will be reduced in the operation of the bellows.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Horiuchi (US patent No. 5,315,435) teaches bellows used in various positions of an optical system.


Mori et al. (US patent No. 2002/0036697) teaches a low-pass filter used outside of the shutter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan
11/07/2006
Patent Examiner
Art Unit 2622



TUAN HO
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